§ 160.133–11 [Reserved]

§ 160.133–13 Approval inspections and tests for prototype release mechanisms.

(a) If the manufacturer is notified that the information submitted in accordance with § 160.133–9 of this subpart is satisfactory to the Commandant, the manufacturer may proceed with fabrication of the prototype release mechanism, and the approval inspections and tests required under this section.

(b) Except as provided in paragraph (f) of this section, the Coast Guard must conduct the approval inspections and witness the approval tests required under this section.

(c) *Manufacturer requirements*. To proceed with approval inspections and tests required by this section, the manufacturer must—

(1) Notify the Commandant and cognizant Officer in Charge, Marine Inspection (OCMI) of where the approval inspections and tests required under this section will take place, and such notification must be in sufficient time to allow making travel arrangements;

(2) Arrange a testing schedule that allows for a Coast Guard inspector to travel to the site where the testing is to be performed;

(3) Admit the Coast Guard inspector to any place where work or testing is performed on release mechanisms or their component parts and materials for the purpose of—

(i) Conducting inspections as necessary to determine that the prototype—

(A) Conforms with the plans reviewed under § 160.133–9 of this subpart;

(B) Is constructed by the methods and with the materials specified in the plans reviewed under § 160.133–9 of this subpart; and

(C) When welding is part of the construction process, is constructed by the welding procedure and materials as per the plans reviewed under § 160.133–9 of this subpart and the welders are appropriately qualified;

(ii) Assuring that the quality-assurance program of the manufacturer is satisfactory;

(iii) Witnessing tests; and

(iv) Taking samples of parts or materials for additional inspections or tests; and

(4) Make available to the Coast Guard inspector the affidavits or invoices from the suppliers of all essential materials used in the production of release mechanisms, together with records identifying the lot or serial numbers of the release mechanisms in which such materials were used.

(d) *Tests*—(1) *Prototype release mechanism readiness*. All tests must be conducted on a complete release mechanism.

(2) *IMO Revised recommendation on testing*. Each prototype release mechanism of each design must pass each of the tests described in IMO Revised recommendation on testing, part 1, paragraph 6.9 (incorporated by reference, see § 160.133–5 of this subpart) applicable to davit-launched or free-fall lifeboats. Tests must be conducted in accordance with these paragraphs of IMO Revised recommendation on testing, Part 1, with the following modifications—

(i) *Visual inspection*. Each release mechanism must be visually inspected to confirm—

(A) Compliance with this subpart;

(B) Conformance with the examined plans; and

(C) Ease of operation and maintenance;

(ii) *Operation*. Operation of the off-load control, for a davit-launched boat, must be tested to confirm that the release lever cannot be shifted to release the boat in either the full load or light load condition. For a free-fall boat, the operation of the hook release must be demonstrated using both activation systems and may be tested without launching the boat;

(iii) *Materials*. Steel meeting ASTM A 653 (incorporated by reference, see § 160.133–5 of this subpart) must meet the coating mass and bend tests requirement specified under ASTM A 653 after galvanizing or other anti-corrosion treatment has been applied. This compliance can be ascertained through a supplier's certification or by conducting actual tests;

(iv) *Tensile tests*. The release mechanism hook assembly and supporting structure must be tensile tested in a

jig built to load the hook assembly in the same way it would be loaded when installed in a boat. The hook assembly will be approved for a maximum of one-sixth of the highest load applied without failure;

(v) *Universal joints.* This test is required if the release mechanism employs universal joints to transmit the release power from the control to the hook release. One of each type and size of universal joint must be set up in a jig with the angles of leads set at 0 (zero), 30, and 60 degrees, respectively. A torque of 540 Nm (400 ft lb) must be applied. This torque must be applied with the connecting rod secured beyond the universal and with the lever arm in the horizontal position. There must be no permanent set, or undue stress, as a result of this test; and

(vi) *Hydraulic controls.* If the release mechanism includes a fluid power and control system, a test of the hydraulic controls must be conducted in accordance with 46 CFR 58.30–35.

(e) *Test waiver.* The Commandant may waive certain tests for a release mechanism identical in construction to smaller and larger release mechanisms that have successfully completed the tests. However, stress calculations in accordance with §160.133–9(b)(3) of this subpart must still be submitted. Tests associated with release mechanism components that have already been accepted by the Commandant are not required to be repeated.

(f) At the request of the manufacturer and discretion of the Commandant, an independent laboratory may perform approval inspections and witness approval tests required by this section so long as the inspections and tests are performed and witnessed in accordance with the procedures agreed upon between the independent laboratory and Commandant under 46 CFR part 159, subpart 159.010.

(g) After completion of approval inspections and tests required by this section, the manufacturer must comply with the requirements of 46 CFR 159.005–9(a)(5) by preparing and submitting to the Commandant for review—

(1) The prototype approval test report containing the same information recommended by IMO MSC Circ. 980 (incorporated by reference, see §160.133–5 of this subpart). The report must include a signed statement by the Coast Guard inspector (or independent laboratory as permitted under paragraph (f) of this section) who witnessed the testing, indicating that the report accurately describes the testing and its results; and

(2) The final plans of the release mechanism as built, in triplicate. The plans must include the instructions for training and maintenance described in §§160.133–19 and 160.133–21 of this subpart, respectively.

(h) The Commandant will review the report and plans submitted under paragraph (g) of this section, and if satisfactory to the Commandant, will approve the plans under 46 CFR 159.005–13.

§160.133–15 Production inspections, tests, quality control, and conformance of release mechanisms.

(a) Unless the Commandant directs otherwise, an independent laboratory must perform or witness, as appropriate, inspections, tests, and oversight required by this section. Production inspections and tests of release mechanisms must be carried out in accordance with the procedures for independent laboratory inspection in 46 CFR part 159, subpart 159.007 and in this section, unless the Commandant authorizes alternative tests and inspections. The Commandant may prescribe additional production tests and inspections necessary to maintain quality control and to monitor compliance with the requirements of this subpart.

(b) *Manufacturer's responsibility.* The manufacturer must—

(1) Institute a quality control procedure to ensure that all production release mechanisms are produced to the same standard, and in the same manner, as the prototype release mechanism approved by the Commandant. The manufacturer's quality control personnel must not work directly under the department or person responsible for either production or sales;

(2) Schedule and coordinate with the independent laboratory (or Coast Guard inspector if required under paragraph (a) of this section) to ensure that all tests are performed as described in this section;